# Commercial Spiny Lobster Sampling

## The Trip Interview Program (TIP)

Data is maintained by the National Marine Fisheries Service Southeast Regional Science Center .

# Duration and description of the program

Commercial spiny lobster fishing trip sampling in Florida has been ongoing since 1985.

Personnel from the National Marine Fisheries Service and the Florida Fish and Wildlife Conservation Commission sample fishing trips at various landing sites throughout the State.

# Sampling methods

Port Agents select sampling sites by various methods. Calling to check for expected landings or unannounced arrival and waiting for catches are the primary methods.

A trip is sampled by interviewing the fisher to obtain catch and effort information and selecting a portion of the catch for biological sampling.

Information obtained from the fisher includes;

Duration of the trip – start and end dates.

Number in the crew (including captain).

Vessel (if any) ID number, name and length.

Gear used, number of traps pulled or divers.

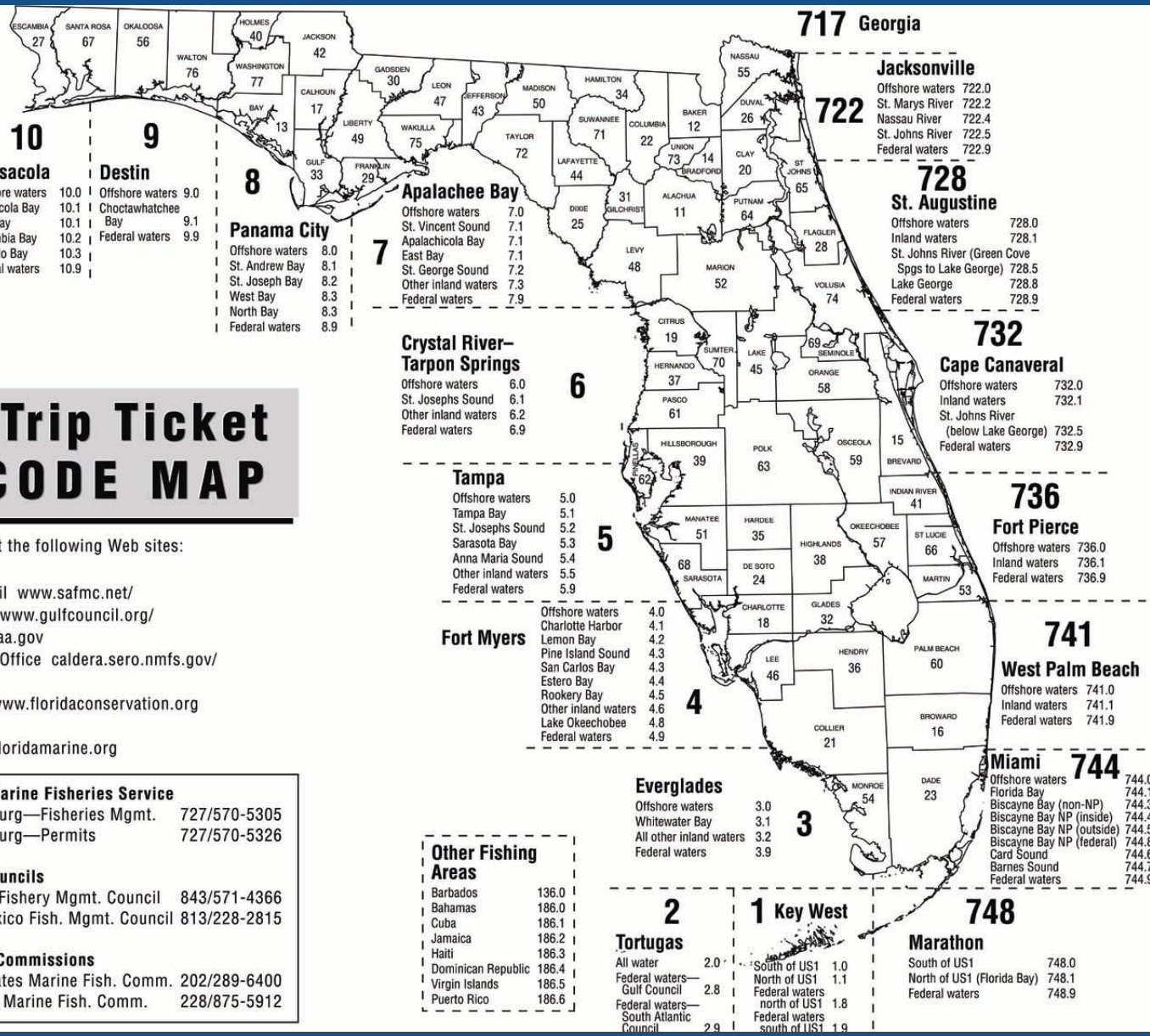
Soaktime, number of days or hours the gear was in the water since last examined or length of dives made during the trip.

Fishing location, various coding systems have been used.

# FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION


**Florida Marine Research Institute**
**Marine Fisheries Trip Ticket Office**
**100 8th Avenue SE**
**St. Petersburg, FL 33701-5020**
**727-822-8783**


# Marine Fisheries Trip Ticket
# FISHING AREA CODE MAP




Fishery Management Regulations can be found at the following Web sites:

**Federal Waters**

South Atlantic Fishery Management Council www.safmc.net/
Gulf of Mexico Fishery Management Council www.gulfcouncil.org/
NOAA Fisheries www.nmfs.noaa.gov
National Marine Fisheries Service Southeast Regional Office caldera.sero.nmfs.gov/

**State Waters**

Florida Fish & Wildlife Conservation Commission www.floridaconservation.org

**Our Website**

Florida Marine Research Institute www.floridamarine.org

**Other Fishing Areas**

| | |
|---|---|
| Barbados | 136.0 |
| Bahamas | 186.0 |
| Cuba | 186.1 |
| Jamaica | 186.2 |
| Haiti | 186.3 |
| Dominican Republic | 186.4 |
| Virgin Islands | 186.5 |
| Puerto Rico | 186.6 |

| | |
|---|---|
| **FWC FMRI St Petersburg** | |
| Marine Fisheries Trip Ticket Office | 727/822-8783 |
| FMRI Fax (Trip Ticket Office) | 727/894-6181 |
| Florida Marine Research Institute | 727/896-8626 |
| **FWC Tallahassee** | |
| Division of Marine Fisheries | 850/487-0554 |
| Licenses and Permits Section | 850/487-3122 |
| Marine Fisheries Management | 850/488-6058 |
| Marine Fisheries Services | 850/922-4340 |
| **LAW ENFORCEMENT** | **888/404-3922** |
| **National Marine Fisheries Service** | |
| St. Petersburg—Fisheries Mgmt. | 727/570-5305 |
| St. Petersburg—Permits | 727/570-5326 |
| **Federal Councils** | |
| S. Atlantic Fishery Mgmt. Council | 843/571-4366 |
| Gulf of Mexico Fish. Mgmt. Council | 813/228-2815 |
| **Interstate Commissions** | |
| Atlantic States Marine Fish. Comm. | 202/289-6400 |
| Gulf States Marine Fish. Comm. | 228/875-5912 |

Additional data obtained from the landing site (wholesale dealer) :

Species landed.

Total weight of catch.

Price per pound.

Trip ticket number, so TIP sample can be compared with the reported information.

# Biological sampling

A sample of the catch, 40 to 50 lbs. is selected randomly as the catch is unloaded.

The sample is weighed.

Each lobster is measured for carapace length and sexed.

Female reproductive status may also be recorded.

# Results from sampling

Table 1. Number of lobsters sampled from commercial catches by region and gear, 1985-2004.

| | Region | | | | | |
|---|---|---|---|---|---|---|
| | FL Keys | West of Key west | Southeast FL | Northeast FL | West Coast FL | Not recorded |
| Gear | | | | | | |
| Traps | 90,858 | 32,435 | 6,844 | 0 | 138 | 3,143 |
| Diving | 4,688 | 2,757 | 1,265 | 732 | 0 | 166 |
| Other | 382 | 133 | 240 | 2 | 0 | 1 |
| Unknown | 27 | 0 | 0 | 0 | 0 | 29 |
| Total | 95,955 | 35,325 | 8,349 | 734 | 138 | 3,339 |

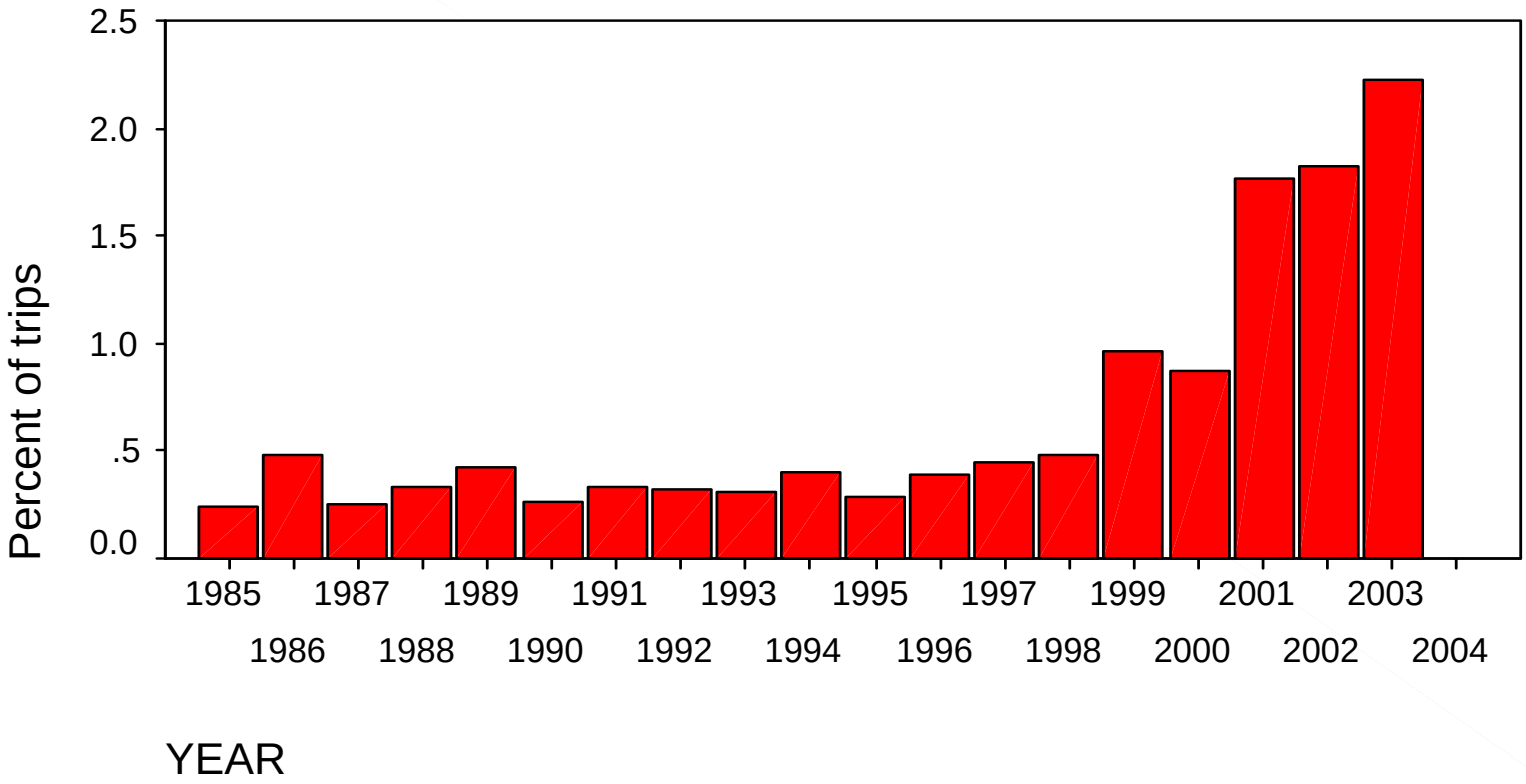
Table 2. Number of commercial lobster trips sampled by region and gear, 1985-2004.

| | Region | | | | | |
|---|---|---|---|---|---|---|
| | FL Keys | West of Key West | Southeast FL | Northeast FL | West Coast FL | Not recorded |
| Gear | | | | | | |
| Traps | 2,410 | 743 | 219 | 15 | 4 | 102 |
| Diving | 144 | 59 | 43 | 2 | 0 | 12 |
| Other | 12 | 133 | 9 | 2 | 0 | 1 |
| Unknown | 2 | 5 | 0 | 0 | 0 | 3 |
| Total | 2,568 | 940 | 271 | 19 | 4 | 118 |

# Commercially Landed Spiny Lobster

## Percentage of fishing trips sampled

## 1985-2004



# Commercially Landed Spiny Lobster

## Standardized catch rate by year

## 1988-2003

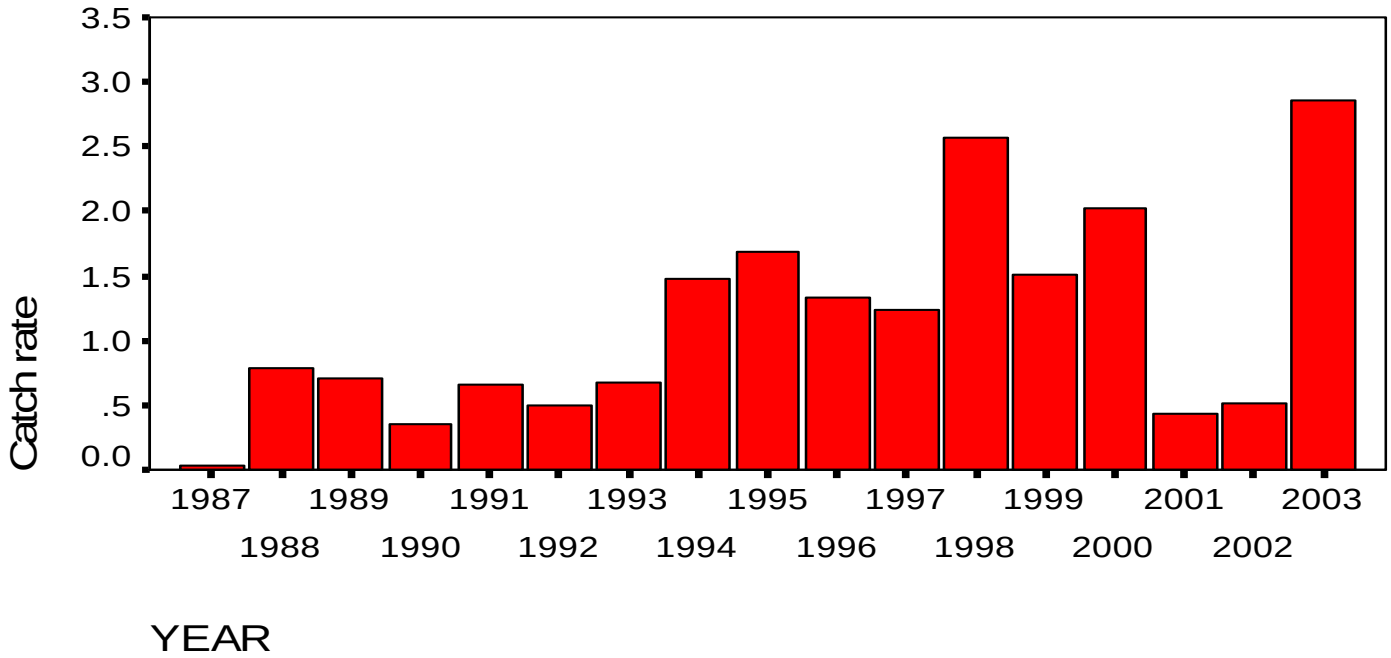


Table 3. Descriptive statistics of male lobsters sampled from commercial catches, 1985-2005, Carapace lengths (CL) measurements in millimeters.

| Year | Number | Mean CL | Std. Error | Median CL | Minimum CL | Maximum CL |
|---|---|---|---|---|---|---|
| 1985 | 1,051 | 87.6 | 0.257 | 86 | 73 | 127 |
| 1986 | 2,086 | 88.6 | 0.229 | 87 | 69 | 164 |
| 1987 | 1,456 | 88.6 | 0.241 | 87 | 74 | 133 |
| 1988 | 3,158 | 85.9 | 0.015 | 84 | 69 | 159 |
| 1989 | 3,624 | 88.6 | 0.163 | 87 | 75 | 161 |
| 1990 | 1,951 | 88.0 | 0.264 | 85 | 75 | 161 |
| 1991 | 2,869 | 89.7 | 0.232 | 87 | 71 | 170 |
| 1992 | 2,973 | 90.2 | 0.383 | 86 | *10.6 | 180 |
| 1993 | 2,552 | 94.1 | 0.425 | 86 | 71 | 209 |
| 1994 | 3,581 | 88.8 | 0.839 | 85 | 60 | 185 |
| 1995 | 2,436 | 93.7 | 0.336 | 89 | 73 | 183 |
| 1996 | 3,201 | 87.6 | 0.190 | 85 | 72 | 180 |
| 1997 | 3,889 | 87.4 | 0.168 | 85 | 70 | 176 |
| 1998 | 3,058 | 89.0 | 0.194 | 87 | *11.8 | 155 |
| 1999 | 6,767 | 88.1 | 0.125 | 86 | 70 | 174 |
| 2000 | 5,056 | 89.2 | 0.156 | 86 | 73 | 172 |
| 2001 | 7,241 | 91.7 | 0.179 | 86 | *8.0 | 196 |
| 2002 | 7,691 | 90.0 | 0.149 | 86 | *10.5 | 194 |
| 2003 | 9,538 | 89.2 | 0.116 | 87 | *10.0 | 190 |
| 2004 | 1177 | 87.9 | 0.362 | 84 | 75 | 170 |

Minimum CL measurments with an * are possible data entry errors.

Table 4. Descriptive statistics of female lobsters sampled from commercial catches, 1985-2005, Carapace lengths (CL) measurements in millimeters.

| Year | Number | Mean CL | Std. Error | Median CL | Minimum CL | Maximum CL |
|---|---|---|---|---|---|---|
| 1985 | 877 | 83.5 | 0.221 | 82 | 70 | 119 |
| 1986 | 1,967 | 84.7 | 0.176 | 83 | 69 | 140 |
| 1987 | 1,500 | 84.4 | 0.189 | 83 | 70 | 123 |
| 1988 | 2,728 | 83.1 | 0.119 | 82 | 63 | 134 |
| 1989 | 3,523 | 84.6 | 0.118 | 83 | 70 | 138 |
| 1990 | 1,809 | 85.1 | 0.220 | 83 | 72 | 146 |
| 1991 | 2,536 | 86.0 | 0.206 | 83 | 50 | 152 |
| 1992 | 3,103 | 86.1 | 0.248 | 84 | *22.0 | 145 |
| 1993 | 2,049 | 88.3 | 0.317 | 83 | 66 | 165 |
| 1994 | 3,060 | 85.5 | 0.180 | 83 | 58 | 175 |
| 1995 | 2,388 | 88.1 | 0.241 | 85 | 72 | 165 |
| 1996 | 3,028 | 83.9 | 0.145 | 82 | 66 | 147 |
| 1997 | 3,040 | 83.5 | 0.142 | 81 | 72 | 138 |
| 1998 | 2,714 | 85.0 | 0.160 | 83 | 70 | 152 |
| 1999 | 5,324 | 84.4 | 0.108 | 82 | 70 | 156 |
| 2000 | 4,565 | 85.7 | 0.146 | 83 | *8.5 | 155 |
| 2001 | 6,918 | 87.5 | 0.134 | 84 | 69 | 160 |
| 2002 | 6,914 | 87.0 | 0.130 | 84 | 70 | 151 |
| 2003 | 8,586 | 85.8 | 0.099 | 83 | 70 | 177 |
| 2004 | 1211 | 86.4 | 0.261 | 84 | 71 | 132 |

Minimum CL measurments with an * are possible data entry errors.

# Precision of data in the TIP database

Catch and effort data is obtained from directly fishers and information such as gear number or soak time may be approximate.

Catch data such as weight and price are accurate.

Biological data, carapace length, sample weight and sex are accurate.

The TIP database has undergone several changes in format during its history and data entry and coding errors have occurred.

For example:

Some carapace lengths are extremely small < 20 mm. This could be from a miss coding of measurement units (cm instead of mm).

State personnel in the Keys are shown to have sampled areas from the central west coast of Florida, this has not occurred.

Fishing location codes that do not exist are in the database.

The occurrence of these errors is relatively small, however the relevant samplers should check and correct them so that the primary database can be corrected.